



P.B.5818 - Patentlaan 2
2280 HV Rijswijk (ZH)
☎ +31 70 340 2040
TX 31651 epo nl
FAX +31 70 340 3016

**Europäisches
Patentamt**

Zweigstelle
in Den Haag
Recherchen-
abteilung

**European
Patent Office**

Branch at
The Hague
Search
division

**Office européen
des brevets**

Département à
La Haye
Division de la
recherche

Brose, Gerhard
Alcatel,
Intellectual Property Department Stuttgart
70430 Stuttgart
ALLEMAGNE

Eingang bei ZPL

20. FEB. 2003

Term. 20.04.03 MH
Beard. not. Feb.

Datum/Date

20.02.03

Zeichen/Ref./Réf.

113 210

Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°.

02360226.1-1249-

Anmelder/Applicant/Demandeur/Patentinhaber/Propriétaire/Titulaire

ALCATEL

COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

☐ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division:

☐ abstract

☐ title

☒ The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract:

5

REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	WO 02 45383 A (ESION NETWORKS INC) 6 June 2002 (2002-06-06) * page 1, line 27 - page 3, line 2 * * page 9, line 2 - line 11; figure 3 * * page 10, line 23 - page 12, line 6 * ----	1-9	H04Q11/04 H04M11/06 H04Q3/58
X	EP 1 176 837 A (NEC CORPORATION) 30 January 2002 (2002-01-30) * paragraph '0039! - paragraph '0066! * ----	1-9	
X	WO 98 58489 A (TELIA AB) 23 December 1998 (1998-12-23) * the whole document * ----	1-9	
A	SCWEBER B: "ANALOG FRONT ENDS BRIDGE THE XDSL-TO-REAL-WORLD CHASM" EDN - ELECTRICAL DESIGN NEWS, vol. 44, no. 7, 1 April 1999 (1999-04-01), page 48,50,52,54,56,58,60,62,64 XP000899059 ISSN: 0012-7515 * figure 1 * -----	1-9	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			H04Q H04M
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 4 February 2003	Examiner Vercauteren, S
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 02 36 0226

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-02-2003

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0245383	A	06-06-2002	AU	2334702 A	11-06-2002
			WO	0245383 A2	06-06-2002
			US	2002064221 A1	30-05-2002
<hr/>					
EP 1176837	A	30-01-2002	JP	2000308101 A	02-11-2000
			AU	3839100 A	02-11-2000
			EP	1176837 A1	30-01-2002
			CN	1346577 T	24-04-2002
			WO	0064196 A1	26-10-2000
<hr/>					
WO 9858489	A	23-12-1998	EE	9900579 A	15-08-2000
			EP	0990341 A1	05-04-2000
			JP	2002511990 T	16-04-2002
			NO	996152 A	13-12-1999
			SE	9702316 A	19-12-1998
			WO	9858489 A1	23-12-1998
<hr/>					



ABSTRACT / ZUSAMMENFASSUNG / ABREGE

02360226.1

The invention relates to Digital Subscriber Line (DSL) infrastructure. More particularly, the present invention relates to a remote Digital Subscriber Line Access Multiplexer (DSLAM) only partially hosted by a central office (CO), split into a central DSL-termination unit (DTU-C) hosted at CO and a remote DSL termination unit (DTU-R), where the DTU-R comprises an analog front end AFE for each DSL line, a multiplexer/de-multiplexer unit DeMux2, and a transmission network interface A4'. The DTU-C comprises correspondingly a transmission network interface, a multiplexer/de-multiplexer unit Mux, a digital back end Dig for each DSL line. The invention is heavily based on digital signal processing techniques.